

REMARKS

Claims 1-5 and 7-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Glinz (U.S. Patent No. 6,463,976) in view of Conger (U.S. Patent No. 4,036,765) and French (U.S. Patent No. 3,913,654). In response, Applicant amended independent claims 1 and 4 to clarify that the retention groove(s) receive lubricant in an inner peripheral surface of an inner liner of the pneumatic tire, and also that only a reinforcement rubber layer is inserted between the carcass layer and the inner liner in a region corresponding to the retention groove(s). Independent claims 1 and 4 further clarify that retention groove(s) have a depth in a range of 0.5 to 2.0 mm. Applicant traverses the rejection based on these amendments.

Glinz has an emergency running support body 2 that has axial outer wall sections 6, 7 and a pair of apexes on the shell-shaped ring body 3. As acknowledged by the Examiner, Glinz is silent with respect to the inclusion of a retention groove or grooves on an inner peripheral surface of the tire. However, the Examiner asserts Conger teaches this feature.

Conger is directed to a lubricant for a pneumatic tire and wheel assembly wherein the lubricant functions primarily when the tire is being operated in a flat condition. Conger discloses a lubricant that is nonflowing at temperatures less than 70°C, but which becomes flowing at 90°C or higher (see col. 1, lines 39 *et seq.*). However, since the fluid of Conger does not generally flow at normal operating temperatures of the tire, Conger is not concerned with maintaining lubricant in a specific position within the pneumatic tire. In

particular, Conger is not concerned with forming retention grooves as in the present invention to receive lubricant therein.

French is also directed to pneumatic tires. However, as previously argued in Amendment B, French is concerned with regions of the interior surface of the tire which come into contact with other regions of the interior surface of the tire in a run-flat condition and that are radially outward at a rim flange. However, French has no contact between the shoulder portion and the sidewall bottom portion during the driving of a run-flat tire.

In the outstanding Office Action on page 3, first paragraph, it is asserted that Applicant has not provided a conclusive showing of unexpected results to establish the criticality of the claimed arrangement. Applicant respectfully submits that with the addition of the depth of the retention groove(s) in claims 1 and 4, Applicant has provided such a criticality in the claims. Applicant further submits that French provides no motivation to arrange a retention groove or grooves in a position where the run-flat contacts the tire. This is because the run-flat would not provide any rubber-on-rubber friction at such a position, contrary to the teaching of French.

More specifically, Applicant respectfully submit that independent claims 1 and 4, as now amended, recite a criticality of the depth of each retention groove being in the range of 0.5 to 2.0 mm. As discussed in Applicant's specification at paragraph [0028], it is preferable that the groove depth d of the retention groove(s) be set in a range of 0.5 to 2.0 mm. Since centrifugal force is generated when a tire rotates, lubricant flows toward a central portion of the inner peripheral surface in a width-direction of the tire. However, in the

present invention since the lubricant L has retention grooves within the specified range of groove depth, it becomes possible to retain the lubricant in the retention groove against centrifugal force. Moreover, since the groove depth is not deeper than 2.0 mm, it is less likely that durability of the pneumatic tire is lower due to stress concentration on the retention groove (see paragraph [0029] of the present application). Also, the lower limit of 0.5 mm ensures that lubricant is trapped within the retention groove.

In addition to the above unexpected results establishing a criticality of the present invention, Applicant respectfully submits that there is no motivation to combine Conger with Glinz and French. Conger has a lubricant that remains in a fixed position during normal operation of the tire. Accordingly, Conger provides no motivation to have a particular groove depth for capturing the lubricant layer. Similarly, French provides not motivation to arrange any retention groove or grooves at each of the apexes. Therefore, Applicant respectfully submit that there is no motivation to combine Conger and French with Glinz. For this additional reason, withdrawal of the § 103(a) rejection is respectfully requested.


For all of the foregoing reasons, Applicant submits that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

If a Petition under 37 C.F.R. §1.136(a) for an extension of time for response is required to make the attached response timely, it is hereby petitioned under 37 C.F.R. §1.136(a) for an extension of time for response in the above-identified application for the period required to make the attached response timely. The Commissioner is hereby authorized to charge any additional fees which may be required to this Application under 37 C.F.R. §§1.16-1.17, or credit any overpayment, to Deposit Account No. 07-2069.

Respectfully submitted,

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